

REMARKS/ ARGUMENTS

The foregoing amendment and the following arguments are provided to impart precision to the claims, by more particularly pointing out the invention, rather than to avoid prior art.

Drawing Objections

The Examiner objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the descriptions: element 223 on page 8, line 14 and in Figure 2, element 212.

Applicants have amended the specification and removed element number 223 and replaced it with element number 212. Element number 212 will remain in Figure 2 in compliance with 37 C.F.R. 1.84(p)(5). No new matter has been added.

Specification Objections

The Examiner objected to the title of the specification as not being descriptive. A new title that is clearly indicative of the invention to which the claims are directed has been provided.

Double Patenting

Claim 43 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 4 of prior U.S. Patent 6,353,883. This is a double patenting rejection. Claim 43 has been canceled, thereby obviating the rejection.

Claims 29-32, 35, 37-38, and 42-43 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 2-5, 12, 13-14, and 16-18 of copending Application No. 09/884,718. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. A terminal disclaimer is included herein to obviate the rejection.

35 U.S.C. § 102(b) Rejections

Examiner rejected claims 39, 42, and 44 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,903,750 (hereinafter "Yeh"). The Applicants respectfully disagree, and submit the following arguments in defense of their position.

As understood by the Applicants, Yeh is directed to branch prediction. *See* Col. 2 Lines 23-38. While Figure 2A does include the words "Predicate Prediction," the text describing Figure 2A makes it clear that branch prediction is being performed. *See* Col. 7 Lines 13-59, e.g. "the predicate prediction 220 ... indicates which of the single-target branch instructions are predicted to be Taken," "Given a predicate prediction of 011, the first taken branch is B₁ ..."

In contrast, independent claim 39 requires a predicted predicate value (PPV) calculator to calculate a PPV. That is, claim 39 requires a calculator that can predict a predicate as opposed to a branch. Predicates, as opposed to branches, are not predicted to be Taken as described in Yeh, but as TRUE or FALSE. Thus, independent claim 39 is allowable. Similarly, dependent claims 42 and 44 adding additional limitations are also allowable.

35 U.S.C. § 103(a) Rejections

Examiner rejected claims 29-34 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,903,750 (hereinafter "Yeh") in view of U.S. Patent 6,009,512 (hereinafter "Christie"). The Applicants respectfully disagree, and submit the following arguments in defense of their position.

As understood by the Applicants, Yeh is directed to branch prediction and not predicate prediction, as set forth above. Christie is used by the Examiner to teach a COMPARE instruction to determine an actual predicate value.

However, in addition to the element of executing a COMPARE, independent claim 29 requires, *inter alia*, determining a predicted predicate value (PPV) for a predicate, and conditionally executing a predicated instruction depending on the PPV. As argued above, these elements cannot be taught or suggested by Yeh, and are also not found, nor does the Examiner claim that they should be found, in Christie. Therefore, independent claim 29 is allowable. Similarly, dependent claims 31-34 adding further limitations are also allowable.

Examiner rejected claim 30 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,903,750 (hereinafter "Yeh") in view of U.S. Patent 6,009,512 (hereinafter "Christie") as applied to claim 29 above, and further in view of Heuring and Jordan's Computer Systems Design and Architecture (hereinafter "Heuring"). The Examiner claims Heuring, at pg. 228 para. 3, teaches "executing the predicated instruction after flushing the pipeline." Since the reference paragraph addresses branch prediction as opposed to predicate prediction, Heuring cannot teach or suggest the element claimed by the Examiner. Furthermore, Heuring further does not teach any element in independent claim

29 on which claim 30 depends adding further limitations. Thus, claim 30 is allowable.

Examiner rejected claims 35-38 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,903,750 (hereinafter "Yeh") in view of Heuring and Jordan's Computer Systems Design and Architecture (hereinafter "Heuring"). Independent claim 35 includes limitations similar to allowable claim 39 and is allowable over the cited art because of the arguments set forth above.

Examiner rejected claims 40, 41, and 43 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,903,750 (hereinafter "Yeh") in view of U.S. Patent 5,857,104 (hereinafter "Natarajan"). Claim 43 has been canceled. Claims 40 and 41 depend from allowable claim 39 adding further limitations, and are thus also allowable.

Examiner rejected claims 45-50 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,857,104 (hereinafter "Natarajan") in view of U.S. Patent 5,903,750 (hereinafter "Yeh"). Yeh is directed to branch prediction and not predicate prediction, as set forth above. Similarly, Natarajan is also directed to branch prediction and not predicate prediction. Thus, independent claim 45, which contains limitations similar to allowable claim 39 related to predicate prediction is also allowable. Similarly, dependent claims 46-50 adding further limitations are also allowable.

CONCLUSION

Applicants respectfully submit the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Adam Furst at (408) 947-8200.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

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1/23/04



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